

Claims

1. A seal comprising a first sealing member and a second sealing member, each sealing member having an accessway to facilitate access from one side of the sealing member to the other side of the sealing member, the accessways being offset to facilitate sealed access of an object through the sealing members.
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2. A seal as claimed in claim 1 wherein the accessway comprises an opening in the sealing member.
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3. A seal as claimed in claim 2 wherein the opening is located substantially centrally in the sealing member.
4. A seal as claimed in claim 1 wherein the accessway comprises a passageway extending by the sealing member.
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5. A seal as claimed in claim 4 wherein the passageway is located substantially at an edge of the sealing member.
- 20 6. A seal as claimed in any of claims 1 to 5 wherein at least one sealing member is manipulable to facilitate alignment of the accessways.
7. A seal as claimed in claim 6 wherein the sealing member is at least partially of a flexible material.
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8. A seal as claimed in claim 6 or 7 wherein the sealing member is at least partially of a resilient material.
9. A seal as claimed in any of claims 1 to 8 wherein the sealing member is of silicone or latex.
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10. A seal as claimed in any of claims 1 to 9 wherein the first sealing member is coupled to the second sealing member.
- 5 11. A seal as claimed in claim 10 wherein the seal comprises a ring to which both the first sealing member and the second sealing member are coupled.
12. A seal as claimed in any of claims 1 to 11 wherein the seal comprises means to bias the first sealing member and the second sealing member towards one another.
- 10 13. A seal as claimed in claim 12 wherein the biasing means comprises a magnet coupled to each sealing member.
14. A seal as claimed in any of claims 1 to 13 wherein the seal comprises three or
15 more sealing members.
15. A seal as claimed in any of claims 1 to 14 wherein the sealing member comprises a sheet.
- 20 16. A seal comprising a first sealing member and a second sealing member, each sealing member having an accessway to facilitate access from one side of the sealing member to the other side of the sealing member, and a closure member movable between a sealing position in which the closure member occludes at least one accessway and an access position in which the accessways are at least
25 partially open for passage of an object therethrough.
17. A seal as claimed in claim 16 wherein the seal comprises means to bias the closure member towards the sealing position.
- 30 18. A seal as claimed in claim 17 wherein the biasing means comprises one or more resilient members.

19. A seal as claimed in claim 18 wherein the resilient member comprises an elastic band.
- 5 20. A seal as claimed in any of claims 16 to 19 wherein the closure member is located between the first sealing member and the second sealing member.
21. A seal as claimed in any of claims 16 to 20 wherein the seal comprises at least one tether to prevent passage of the closure member through the accessway.
- 10 22. A seal as claimed in any of claims 16 to 21 wherein the first sealing member is coupled to the second sealing member.
23. A seal as claimed in claim 22 wherein the seal comprises a ring to which both the first sealing member and the second sealing member are coupled.
- 15 24. A seal as claimed in any of claims 16 to 23 wherein the accessway in the first sealing member and the accessway in the second sealing member are aligned.
- 20 25. A seal as claimed in any of claims 16 to 24 wherein the accessway comprises an opening in the sealing member.
26. A seal as claimed in claim 25 wherein the opening is located substantially centrally in the sealing member.
- 25 27. A seal as claimed in claim 25 or 26 wherein the sealing member comprises a collar around the opening.
28. A seal as claimed in claim 27 wherein the collar is provided on a side of the sealing member opposite to the closure member.
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29. A seal as claimed in any of claims 16 to 28 wherein the closure member comprises a ball.
30. A seal as claimed in claim 29 wherein the ball is spherical.
- 5 31. A seal as claimed in any of claims 16 to 30 wherein the sealing member comprises a sheet.
- 10 32. A seal comprising a first sealing member and a second sealing member, the sealing members being configured to overlap one another such that a portion of the first sealing member overlaps a portion of the second sealing member along a first overlap region and a portion of the second sealing member overlaps a portion of the first sealing member along a second overlap region.
- 15 33. A seal as claimed in claim 32 wherein at least one sealing member is manipulable to facilitate sealed passage of an object between the sealing members.
- 20 34. A seal as claimed in claim 33 wherein the sealing member is manipulable to facilitate sealed passage at the junction of the first overlap region and the second overlap region.
- 25 35. A seal as claimed in claim 33 or 34 wherein the sealing member is at least partially of a flexible material.
- 30 36. A seal as claimed in any of claims 33 to 35 wherein the sealing member is at least partially of a resilient material.
37. A seal as claimed in any of claims 32 to 36 wherein the sealing member is of silicone or latex.

38. A seal as claimed in any of claims 32 to 37 wherein the area of the first overlap region is substantially equal to the area of the second overlap region.
- 5 39. A seal as claimed in any of claims 32 to 38 wherein the first sealing member is coupled to the second sealing member.
40. A seal as claimed in claim 39 wherein the seal comprises a ring to which both the first sealing member and the second sealing member are coupled.
- 10 41. A seal as claimed in any of claims 32 to 40 wherein the sealing member comprises a sheet.
42. A seal comprising a sleeve through which an object may be passed, and means to bias the sleeve into a closed configuration.
- 15 43. A seal as claimed in claim 42 wherein the biasing means is provided integral with the sleeve.
44. A seal as claimed in claim 43 wherein the sleeve is configured to curl-up upon itself to the closed configuration.
- 20 45. A seal as claimed in claim 43 wherein the sleeve is configured to twist-up upon itself to the closed configuration.
- 25 46. A seal as claimed in any of claims 42 to 45 wherein the seal comprises a platform to which the sleeve is coupled.
47. A seal as claimed in claim 46 wherein the platform is of an annular shape.
- 30 48. A seal as claimed in claim 46 or 47 wherein the platform comprises a stiffening ring.

49. A seal substantially as hereinbefore described with reference to the accompanying drawings.
- 5 50. A surgical device comprising a seal as claimed in any of claims 1 to 49.
51. A surgical device comprising a proximal seal and a distal seal, the distal seal comprising a seal as claimed in any of claims 1 to 49.
- 10 52. A device as claimed in claim 51 wherein the proximal seal comprises a lip seal, or an iris valve.
53. A surgical assembly comprising a surgical device as claimed in any of claims 50 to 52, and a wound retractor.
- 15 54. An assembly as claimed in claim 53 wherein the device is releasably mountable to the retractor.
55. An assembly as claimed in claim 53 wherein the device is integral with the retractor.
- 20 56. A surgical assembly substantially as hereinbefore described with reference to the accompanying drawings.
- 25 57. A surgical device comprising:-

a retracting member movable from an insertion configuration to a retracting configuration to retract laterally a wound opening; and

a sealing member for sealing a retracted wound opening;
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the sealing member having at least two accessways to facilitate sealed access through a retracted wound opening.

5 58. A device as claimed in claim 57 wherein the sealing member comprises at least one chamber for receiving pressurised fluid to seal at least one accessway.

59. A device as claimed in claim 57 or 58 wherein the sealing member comprises at least one iris valve to seal at least one accessway.

10 60. A device as claimed in any of claims 57 to 59 wherein the sealing member comprises at least one lip seal to seal at least one accessway.

61. A device as claimed in any of claims 57 to 60 wherein the sealing member is rotatable in a sealed manner relative to the retracting member.

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62. A surgical device comprising:-

a retracting member movable from an insertion configuration to a retracting configuration to retract laterally a wound opening; and

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a sealing member for sealing a retracted wound opening;

the sealing member being rotatable in a sealed manner relative to the retracting member.

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63. A device as claimed in any of claims 57 to 62 wherein the sealing member is releasably mounted to the retracting member.

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64. A device as claimed in any of claims 57 to 63 wherein the device comprises a proximal member for location externally of a wound opening, the proximal

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member being movable relative to the retracting member to move the retracting member to the retracting configuration.

- 5 65. A device as claimed in claim 64 wherein the proximal member comprises an annular ring means.
66. A device as claimed in claim 65 wherein the annular ring means comprises an inner ring and an outer ring between which the retracting member may be led.
- 10 67. A device as claimed in any of claims 57 to 66 wherein the sealing member is at least partially transparent.
68. A surgical device substantially as hereinbefore described with reference to the accompanying drawings.

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